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The Relationship between Emotional Intelligence, Resiliency, and Mental Health in Older Adults: The Mediating Role of Savouring

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Graduate Program in Psychology

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Science

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ABSTRACT

Traditionally, mental and physical health have been considered indicators of successful aging. However, resiliency, the propensity to bounce back from negative events, is beginning to emerge as an important aspect of aging successfully. Further, possessing emotional intelligence (EI) has been associated with improved physical and mental health. Positive emotions consistently demonstrate numerous mental and physical health benefits, however savouring, the process through which positive emotions are focused on, has comparatively been under-studied. The present study hypothesized that savouring, resiliency and EI would predict physical health in older adults, and that savouring would mediate the relationship between resiliency, EI, and mental health. Contrary to hypotheses, none of the variables significantly predicted physical health. In partial support of hypotheses, savouring mediated the relationship between resiliency and mental health, but did not mediate the relationship between EI and mental health when the two models were combined.

Keywords: resiliency; emotional intelligence; savouring; mental health; physical health; successful aging

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CHAPTER 1: INTRODUCTION

1. Introduction

Canada's population is aging at a rapid pace. It is expected that one in four people in Canada will be aged 65 or older by the year 2030 (Statistics Canada, 2014). With the realization that soon 25% of the Canadian population will consist of seniors, it is important to focus on what aspects contribute to successful aging. One aspect of successful aging is maintaining physical and mental health (Rowe & Kahn, 1997). It has been commonly observed that some older adults appear to thrive as they age despite significant adversities and setbacks whereas others become dismal and resigned in the face of adversity. These individual differences may be attributed to one's level of resiliency. Resiliency is defined as an individual's ability to adapt and cope with change and adversity (Wagnild & Young, 1993). Resiliency as a concept has traditionally been studied primarily in children, but more recently, is being recognized as a critical factor in the study of aging (Wild, Wiles, & Allen, 2013; Harris, 2008).

Another comparatively understudied concept in the successful aging literature is Emotional Intelligence (EI), defined as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and action" (Salovey & Mayer, 1990, p. 189). The literature has demonstrated numerous mental and physical health benefits associated with greater EI (Martins, Ramalho, & Morin, 2010), but this area remains severely under-investigated in the older adult population.

As will be demonstrated from the ensuing literature review, both resiliency and EI are associated with positive emotions. Positive emotions such as contentment, joy, and

love (Fredrickson, 1998) are associated with numerous physical (Pressman & Cohen, 2005) and mental health benefits (Crawford & Henry, 2004). While the benefits of positive emotions are well established (Tugade, Fredrickson, & Barrett, 2004), the mechanisms by which these emotions are utilized are not as well known. One such mechanism that may facilitate the experience of positive emotions is savouring.

Savouring, defined as an individual's capacity to focus on positive experiences and the perceived control they have over these positive emotions (Bryant, 2003), provides a process to understand how positive emotions are produced, utilized, and, attended to.

Under the framework of the "Broaden and Build Theory" of positive emotions (Fredrickson, 1998, 2001, 2004), and guided by the wealth of positive emotions literature, the present study aims to extend our understanding of the underlying processes that link resiliency and EI with mental health outcomes in older adulthood. More specifically, the present study will explore savouring positive experiences as a means of preserving and producing positive emotions, and how this process contributes to the relationships between resiliency, EI, and mental health. Additionally, this study aims to confirm the relationship between resiliency, EI, and physical health in older adults and explore savouring as a predictor of physical health.

1.1 Resiliency

Resiliency refers to the ability to adapt and change in a positive way when faced with various adversities and setbacks (Block & Block, 1980). The term *resiliency* has been conceptualized as a profile of individual characteristics that are demonstrated in everyday life, and is differentiated from the construct of *resilience*, which is the degree of positive adaptation only after experiencing a specific negative event (Luthar, Cicchetti, &

Becker, 2000), although the two terms are often used interchangeably. Resiliency research originated in the area of developmental psychology and focused on various risk and protective factors that allowed children to adapt to adverse life events or negative situations (Masten & Germezy, 1985; Rutter, 1979, 1985; Luthar, 1991). More recently, gerontologists and psychologists are also recognizing the utility of studying resiliency in older adult populations (Wild et al., 2013). There is a noticeable shift in the study of aging, whereby the focus is moving from negative symptoms to focusing on positive and strengthening effects (Perkins, 2014). As such, the study of resiliency in older adults is becoming more salient for the study of successful aging (Lavretsky & Irwin, 2007; Wild et al., 2013). Gerontologists are beginning to view resiliency as an indicator of successful aging in lieu of more traditional indicators, such as, avoiding disability. The ability to adapt and cope to life's stressors may be a more feasible method of aging successfully, compared to traditional aspects of successful aging that may be much more difficult to avoid in later life (Gattuso, 2003; Harris, 2008). Research supports this recommendation; a study of older adults found that the majority of older adults sampled believed they were aging successfully, despite many of them experiencing physical illness and disability (Montross et al., 2006).

It may be expected that due to the overall increase in difficulties experienced in older age (e.g., death of friends, physical and cognitive impairment, etc.), that perhaps older adults would demonstrate decreases in resiliency due to the many deleterious circumstances they experience. However, overwhelmingly, research has demonstrated the opposite; resiliency does not decrease with age, but rather older adults demonstrate resilient features at either similar (Nygren et al., 2005), or greater (Gooding, Hurst,

Johnson, & Tarrier, 2012) levels than younger adults and that this pattern is evident even among centenarians (i.e., adults 100 years of age or older) (Jopp & Rott, 2006). Given the potential for increased vulnerabilities in older age (e.g., declining physical health, neurological disorder, loss of spouse, etc.), and the consistency of resiliency across the lifespan, resiliency should continue to be viewed as a valuable concept in the study of successful aging.

1.2 Emotional Intelligence

As previously mentioned, EI is concerned with mental processes that allow us to evaluate, express, and regulate emotions in others and ourselves, and use these emotions in adaptive ways (Salovey & Mayer, 1990). The EI literature has two main perspectives—ability EI and trait EI. Ability EI is concerned with emotional cognitive abilities and is measured using maximum performance tests, similarly to traditional intelligence tests. In contrast, trait EI is viewed as a personality trait concerned with emotional self-perceptions and as such, is measured through self-report (Petrides, 2011). Studies that have compared ability EI to trait EI have found no convergence between the two concepts, supporting the notion that they are distinct (Warwick & Nettelbeck, 2004; Van Rooy, Viswesvaran, & Pluta, 2005). When assessing the predictive ability of EI, especially in relation to other areas of personality research, it can be argued that while individuals may possess the ability to behave emotionally intelligently, this offers little benefit if they do not believe they possess these abilities (i.e., low EI self-perceptions). As such, the present study, and all literature discussed subsequently will be focused on trait EI; that is, the individual's belief in their emotional competencies.

To date, very little research has been conducted examining EI in older adult populations, and what related research there is provides contradictory results. Sociocognitive theories suggest that due to the wealth of interpersonal and emotional experiences older adults have faced in their lives, they will demonstrate greater emotion regulation abilities (Carstensen, Isaacowitz, & Charles, 1999). In support of this theory, studies have found that as people age, they maintain or even improve their emotion regulation abilities (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Charles, Reynolds, & Gatz, 2001; Mroczek & Kolarz, 1998). One can hypothesize then, that older adults would report greater EI due to their increased emotion regulation, a defining feature of EI. On the other hand, neuropsychological theory suggests that as people age, brain regions begin to deteriorate, and increasingly the literature is beginning to demonstrate that the brain regions involved with emotional competencies (Davidson & Irwin, 1999), overlap with the brain regions that tend to deteriorate as people age (Petit-Taboué, Landeau, Desson, Desgranges, & Baron, 1998). This was further supported by the finding that adults aged 60-80 had significant difficulty recognizing emotions in faces, likely due to the deterioration in the brain regions responsible for emotion recognition (Phillips, MacLean, & Allen, 2002). Emotion recognition or evaluation is another aspect of EI, and these findings would suggest that older adults would be more likely to report decreased EI compared to younger adults due to impairment of emotion recognition. Therefore, the related older adult emotion literature provides support for improved competencies for some aspects of EI (i.e., emotion regulation) while simultaneously suggesting diminished EI competencies for other aspects (i.e., emotion evaluation). These discrepancies in the older adult emotion literature demonstrate a need

for increased research to provide clarity as to how EI is reflected in an older adult population, as the current literature is inconsistent.

1.3 Resiliency, EI, Positive Emotions, and Health

1.3.1 Resiliency and Health

One indicator of successful aging—mental health—has been studied alongside resiliency at length in the literature and the findings consistently demonstrate the numerous mental health benefits associated with greater resiliency in adulthood (Hu, Zhang, & Wang, 2015). In young adults, greater resiliency is predictive of fewer indicators of depression and anxiety (Campbell-Sills, Cohan, & Stein, 2006; Ng, Ang, & Ho, 2012; Prince-Embury, Saklofske, & Nordstokke, 2016). Studies looking at the resilience and mental health link in older adults specifically, found that resiliency is both correlated with (Wells, 2009) and predicts better mental health in older adult samples with R-squared values ranging from .19 to .38 (Nygren et al., 2005; Smith & Hollinger-Smith, 2015; Windle, Woods, & Markland, 2010). Specifically, a study of older adults indicated that greater resilience predicted lower depression scores in adults aged 67-98 (Mehta et al., 2008). Furthermore, a cross-sectional study assessed the predictive ability of resiliency across the lifespan and found that resiliency predicted greater mental health across adulthood (i.e., ages 18-79) (Logan-Greene, Green, Nurius, & Longhi, 2014).

While resiliency demonstrates predictive utility when assessing mental health in a normative adult sample, a number of studies have examined the resiliency-mental health link in various unique subgroups. For instance, greater resiliency significantly predicted lower levels of depression and depressive symptoms in older Native American Indians (Schure, Odden, & Goins, 2013), young adults with congenital heart disease (Moon et al.,

2009), adult unemployed job-seekers (Moorhouse & Caltabiano, 2007), women infected with HIV (Spies & Seedat, 2014), and older adult nuns (Wells, Avers, & Brooks, 2012). Lastly, in a study of veterans of recent military operations teams, resiliency mediated the relationships between operations team unit support and both depression and PTSD (Pietrzak et al., 2010).

This resiliency-mental health link has also been demonstrated cross-culturally using various resiliency scales. Resiliency significantly predicts depression in Japanese adults (Hasui et al., 2009), Nigerian adults (Abiola & Udofia, 2011), Korean adults (Baek, Lee, Joo, Lee, & Choi, 2010), and German men (Beutel, Glaesmer, Wiltink, Marian, & Brahlar, 2010). Additionally, resiliency predicts anxiety in Nigerian (Abiola & Udofia, 2011) and Korean adults (Baek et al., 2010), and life satisfaction in German men (Beutel et al., 2010).

The relationship between resiliency and mental health is well-established, though the link between resiliency and physical health is not as well studied, and at times inconsistent. However, there is some evidence to suggest a positive association between resiliency and some aspects of physical health (Hu et al., 2015). Two independent studies found a positive correlation between resiliency and a general factor of physical health (Wells, 2009; Wells et al., 2012), however Nygren and colleagues (2005) expected resiliency would predict physical health, but the evidence did not support this hypothesis. When the resiliency-physical health link was examined across the lifespan, resiliency significantly predicted physical health across adulthood (i.e., ages 18-65+) (Logan-Greene et al., 2014). A study of patients with diabetes found that greater resiliency resulted in a smaller increase of glycosylated hemoglobin (a measure of diabetes

maintenance) (Yi, Vitaliano, Smith, Yi, & Weinger, 2008). Greater resiliency is also associated with faster gait speed (Wells et al., 2012), which is indicative of physical performance that has been linked to survival in older adults (Studenski et al., 2011). Resiliency has also been associated with other physiological indicators independent of health. For instance, young adults with greater resiliency demonstrated faster cardiovascular recovery from stress (as measured by heart rate and blood pressure) than those with lower resiliency (Tugade, 2001).

1.3.2 Emotional Intelligence and Health

Similarly to the resiliency literature, many studies have investigated the relationship between EI and mental health, however the majority of these studies have focused on young or middle aged adults. Studies assessing specific mental health indicators have demonstrated that greater EI has been associated with decreased depression (Dawda & Hart, 2000; Schutte et al., 1998; Mavroveli, Petrides, Rieffe, & Bakker, 2007; Saklofske, Austin, & Minski, 2003), increased life satisfaction (Saklofske et al., 2003; Austin, Saklofske, & Egan, 2005) and less psychological distress (Slaski & Cartwright, 2002). EI has also significantly predicted anxiety in both clinical and non-clinical samples. In a non-clinical sample, EI predicted social interaction anxiety such that higher EI resulted in less social anxiety (Summerfeldt, Kloosterman, Antony, & Parker, 2006), and in a clinical sample, groups of people with obsessive compulsive disorder, panic disorder, and social phobia had lower EI scores than a non-clinical comparison sample (Summerfeldt, Kloosterman, Antony, McCabe, & Parker, 2011). In studies of young adults, EI was positively correlated with self-esteem, negatively correlated with depression and anxiety (Fernandez-Berrocal, Alcaide, Extremera, &

Pizarro, 2006), and significantly predicted depression and anxiety (Extremera & Fernandez-Berrocal, 2006). Furthermore, EI predicted depression and anxiety scores above and beyond self-esteem and frequency of thought suppression in young adults (Fernandez-Berrocal et al., 2006). Subjective well-being has also been studied in relation to EI and findings suggest that EI significantly predicts subjective well-being (Bar-On, 2005) and furthermore, EI predicts subjective well-being once controlling for personality and Type A behaviour patterns (Day, Therrien, & Carroll, 2005). This suggests that EI is a significant predictor when it comes to mental health, apart from other predictors (e.g., personality).

EI and its relation to physical health have been studied just as extensively. EI significantly predicts general physical health (Extremera & Fernandez-Berrocal, 2006), and somatic complaints (Mavroveli et al., 2007) in adolescents. One component of EI in particular, emotion regulation, significantly predicts general physical health (Extremera & Fernandez-Berrocal, 2002; Bauld & Brown, 2009) and menopausal symptom severity in middle-aged women (Bauld & Brown, 2009). Studies looking at EI and physical health in adults found significant differences on all EI factors between groups of people with low-perceived health versus high-perceived health (Bar-On, 2004; Bar-On, 2006). Furthermore, research has shown that EI predicts health outcomes (i.e., health behaviours and objective health care usage) over and above other indicators of health such as body mass index, diet, smoking and drinking habits (Mikolajczak et al., 2015). When faced with a speech preparation task to experimentally induce stress, participants with greater EI experienced less cortisol release than individuals low on EI (Mikolajczak, Roy, Luminet, Fillee, & de Timary, 2007). Lastly, EI was studied in a group of patients with

alopecia areata (an autoimmune disease) and compared to a non-clinical sample, the patients with the autoimmune disease were less emotionally intelligent, suggesting that their lack of EI may be a contributing factor to their poor health (Monselise et al., 2013).

While the literature looking at EI in older adults is sparse, one study by Lloyd, Malek-Ahmadi, Barclay, Fernandez, and Chartrand (2012) found that increases in EI were associated with decreases in depression in an older adult sample. This finding suggests a functional importance for studying EI in older adults, and a need to address this line of research more thoroughly. To date, the majority of research investigating EI and both mental and physical health has been focused on young and middle aged adults, however, these findings suggest that EI is associated with a number of health outcomes that could affect all ages (Martins et al., 2010; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007; Bar-On, 2012). Therefore, given the number of health benefits associated with EI, a logical extension would be to apply these studies with older adults, a population that tends to experience above average health concerns (Steinhagen-Thiessen & Borchelt, 1999; Smith, Borchelt, Maier, & Jopp, 2002).

1.3.3 Positive Emotions and Health

To date, research on emotions and mental health have mainly focused on the relationship between negative emotions and how this negativity impacts mental health (Fredrickson & Levenson, 1998). However, the impact of positive emotions on mental health is beginning to receive greater attention in recent years. Positive affect is negatively associated with depression, anxiety, and stress and when predicting depression, positive affect accounts for a significantly greater proportion of variance than negative affect (Crawford & Henry, 2004). Another research area in which the mental

health benefits of positive emotions are relevant is bereavement studies. Longitudinal studies looking at the relationship between positive emotions and bereavement experiences in middle aged adults have found that instances of positive emotions during a time of bereavement predicted greater psychological well-being a year after the death (Stein, Folkman, Trabasso, & Richards, 1997). Furthermore, greater positive affect predicted decreases in risk for clinical depression at any given time after the death and one month post-bereavement (Moskowitz, Folkman, & Acree, 2003). Given the increased incidences of personal loss that older adults generally experience, combined with the benefits of positive emotions in dealing with these losses, the impact of positive emotions warrants further study in older adults.

A number of studies have assessed the benefits of positive psychology interventions (i.e., interventions that aim to increase positive emotions and cognitions) on depression and well-being outcomes. A meta-analysis of 51 studies found that positive psychology interventions effectively enhanced well-being and decreased depressive symptoms (Sin & Lyubomirsky, 2009). Furthermore, in a study of a newly-developed positive affect intervention, investigators found a significant decrease in depressive symptoms from pre to post intervention, and that this reduction was greater for individuals who were given the intervention program compared to controls (McMakin, Siegle, & Shirk, 2011). These studies demonstrate that interventions aiming to increase positive emotions are effective, and furthermore, provide mental health improvements.

Several studies have also examined the relationship between positive emotions and physical health (Pressman & Cohen, 2005; Salovey, Rothman, Detweiler, & Steward, 2000; Ong, Mroczek, & Riffin, 2011). Positive emotions have been associated with

decreased mortality in non-clinical older adult samples (Palmore, 1969; Maier & Smith, 1999; Levy, Slade, Kunkel, & Kasl, 2002; Kawamoto & Doi, 2002; Ostir, Markides, Black, & Goodwin, 2000), and among patients with AIDS (Moskowitz, 2003) and cancer (Levy, Lee, Bagley, & Lippman, 1988). Positive affect has also been found to protect against stroke (Ostir, Markides, Peek, & Goodwin, 2001) and HIV regression (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). In a study of older adults, positive affect significantly predicted greater mobility and ability to perform activities of daily living (Ostir et al., 2000). Lastly, positive affect is positively correlated with immune response (Stone, Cox, Vladimarsdotir, Jandorf, & Neale, 1987; Stone et al., 1994; Hucklebridge et al., 2000; Berk, Felten, Tan, Bittman, & Westengard, 2001), which may especially benefit older adults, a group that experiences immune system decline (Thoman & Weigle, 1989).

1.4 Broaden and Build Theory of Positive Emotions

Fredrickson's (1998, 2001, 2004) "Broaden and Build Theory" of positive emotions serves as a potential model for describing the relationship between positive emotions, resiliency, and EI. This theory contrasts other emotion theories that traditionally examined the relationship between emotions and "specific action tendencies" (i.e., a propensity to respond to certain situations with certain behaviours). Specific action tendencies are relevant to the study of negative emotions because negative feelings typically arise in threatening situations where a specific action is necessary and adaptive. For example, when a person feels afraid or threatened the specific action tendency might be "escape" or "attack". When someone feels positive emotions however, they are usually not in a threatening situation, and therefore do not require a specific

response. Thus, the Broaden and Build Theory posits that positive emotions *broaden* as opposed to constrict a person's thought-action repertoire (i.e., the thoughts and subsequent actions held in a person's cognitive repertoire). In a study designed to test the theory that positive emotions broaden thought-action repertoires, individuals were assigned to experience neutral feelings, joy, fear, anger or contentment through experimental manipulation. Upon inducing one of the feelings, when asked to record all of the things they wish they could do right at that moment, the participants in the two positive emotion conditions listed significantly more ideas than the participants in the negative emotion conditions. This suggests that positive feelings indeed widened the array of actions the participants had in their repertoire, compared to those who felt negative feelings (Fredrickson & Branigan, 2005).

The broadening of the thought-action repertoire that comes with positive emotions increases the assortment of thoughts and actions that could potentially occur when not feeling threatened (e.g., play, create, explore). In turn, having a greater repertoire results in building more personal resources including psychological, social, physical, and intellectual resources. This building of resources leads to increased resiliency by providing the individual with more protective factors to draw upon when faced with adversity. In addition to increasing resiliency by improving personal resources, the broadening effect helps to “undo” the specific action tendencies that are associated with negative emotion. That is, an individual with a broad thought-action repertoire can more easily regulate negative emotions, and emotion regulation is one aspect of EI (Fredrickson, 1998, 2001). This undoing effect was empirically tested in a study that experimentally induced feelings of anxiety, which in turn increased heart rate and blood

pressure, by asking participants to prepare a speech that would later be recited and judged by peers. Participants were then assigned to watch a film that was intended to induce feelings of amusement, contentment, sadness or neutral feelings. The participants who viewed either of the positive emotion videos recovered faster from their anxiety (as measured by the amount of time for cardiovascular measures to return to baseline) than both the neutral and sad video groups (Fredrickson, Mancuso, Branigan, & Tugade, 2000). This study demonstrates that positive emotions have the ability to improve emotion regulation by helping to undo physiological action tendencies experienced with negative emotions. The aforementioned empirical literature supports the notion that the Broaden and Build Theory is valuable in understanding the underlying relationship between resiliency, EI, and positive emotions. Positive emotions work to broaden our thought-action repertoires, which results in increased personal resources and resiliency, simultaneously improving our ability to emotionally regulate by undoing the specific actions that are associated with negative emotions.

1.4.1 Resiliency and Positive Emotions

There is a growing body of research supporting the theory that positive emotions are associated with increased resiliency (Sandel, 2008; Tugade & Fredrickson, 2004). Furthermore, research suggests that oftentimes positive emotions play a mediating role in the relationship between resiliency and various outcomes. For instance, positive affect was found to mediate the relationship between resiliency and life satisfaction (Liu, Wang, & Li, 2012) and between resiliency and psychological distress in young adults (Liu, Wang, Zhou, & Li, 2014). Furthermore, in older adults with greater resiliency, positive emotions mediate the relationship between stress levels on day one and feelings of

negative emotions felt the following day (Ong, Bergeman, Bisconti, & Wallace, 2006). When resiliency levels were measured at two time points, positive emotions mediated the relationship between resiliency levels at time one and one month later at time two (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009), suggesting that specific positive emotions experienced over the course of a month, predicts greater resiliency. While previous research demonstrates that positive emotions play an important role in resiliency during typical and uneventful times in people's lives, what does this relationship look like during times of crisis? Fredrickson, Tugade, Waugh, and Larkin (2003) investigated the relationship between positive emotions and resiliency in the weeks following the September 11th terrorist attacks. They found that positive emotions experienced after the attacks fully mediated the relationship between pre-crisis resiliency and both depression and psychological resources (i.e., life satisfaction, optimism, and tranquility) in the weeks following the attacks. So while pre-crisis resiliency is predictive of better psychological outcomes following a crisis, this relationship may be due to the experience of positive emotions.

The relationship between positive emotions and resiliency has also been demonstrated experimentally. In a study by Tugade and Fredrickson (2004), when anxiety was induced through speech preparation, positive emotions mediated the relationship between resiliency and the duration of cardiovascular recovery. Participants who reported greater positive emotions recovered more quickly than those who reported fewer positive emotions. Additionally, a study demonstrated that resiliency was positively correlated with positive emotions even after experimentally inducing sadness by viewing a sad film (Phillippe, Lecours, & Beaulieu-Pelletier, 2009). As such, the

relationship between positive emotions and resiliency is well-established, but the process by which these positive emotions are so effective remains considerably understudied.

1.4.2 Emotional Intelligence and Positive Emotions

Numerous studies have demonstrated there is a positive association between EI and positive emotions (Sandel, 2008; Gallagher & Vella-Brodrick, 2008; Mikolajczak, Neils, Hansenne, & Quoidbach, 2008). The Broaden and Build Theory suggests that the broadening effect positive emotions have on our cognitive organization helps improve emotion regulation when experiencing negative emotions by helping to undo the specific tendencies fueled by the negative emotions (Fredrickson, 1998, 2001, 2004). This “undoing effect” between positive emotions and EI has been demonstrated empirically on a number of occasions by assessing positive and negative affect together and the relationship each construct has with EI and various psychological outcomes.

Regression analyses indicate that trait EI significantly predicts life satisfaction in young adults, however when positive affect was added to the equation, EI was no longer a significant predictor (Palomera & Brackett, 2006). The authors suggested that perhaps positive affect plays a mediating role in the relationship between trait EI and life satisfaction. This mediating role of positive affect has subsequently been explored. When assessing the relationship between trait EI and life satisfaction, both positive and negative affect were significant mediators, however positive affect was a stronger mediator than negative affect (Kong & Zhao, 2013). This finding suggests that being emotionally intelligent improves life satisfaction through the ability to regulate emotions, but being able to regulate with positive emotions is a stronger indicator than negative emotion regulation ability. A similar mediating model has been demonstrated in the relationship

between job satisfaction and trait EI, with both positive and negative affect significantly mediating the relationship, but positive affect being a stronger mediator than negative affect (Kafetsios & Zampetakis, 2008). Positive affect has also been found to partially mediate the relationship between trait EI and mental distress in middle-aged adults (Kong, Zhao, & You, 2012). As can be seen, positive emotions play an important role perhaps in the emotion regulation aspect of EI, resulting in better psychological outcomes.

1.5 *Savouring*

Certain areas of psychological research have focused on positive concepts, including positive emotions (Fredrickson, 2001), flourishing (Keyes & Haidt, 2003), and optimism (Carver, Scheier, & Segerstrom, 2010). However, the process by which these positive states are made focal is comparatively understudied. Savouring is a process by which positive emotional states are brought about through the appreciation and enhancement of positive experiences (Bryant & Veroff, 2007). Even though an individual may experience positive events, it does not necessarily mean they believe they have the capacity to actually enjoy and appreciate such events; without this belief in their ability to control and sustain positive emotions, they may not benefit from the host of valuable outcomes positive emotions have to offer. As such, the study of savouring is necessary to improve our understanding of positive emotions (Bryant, 2003). Bryant and Veroff (2007) have differentiated savouring from a number of related concepts, including positive emotions. While savouring is closely related to positive emotions, they remain distinct concepts; positive emotions are what is *felt* and savouring is the *underlying process* of attending to these positive emotions and producing positive affect. Savouring

positive experiences may or may not be intentional, but it does require some level of consciousness. For example, an individual may be consciously aware of attending to the positive experiences in the present moment, or they may automatically attend, but still be able to explicitly recall later the ways in which they focused on their positive experience.

Savouring involves two main concepts: beliefs and responses. Savouring beliefs are an individual's self-evaluations of their ability to savour, which presumably reflects their actual savouring capacity to some extent. Within savouring beliefs there are three types of savouring: savouring the present moment, savouring the past (reminiscing), and savouring the future (anticipating). Savouring the present moment involves attending to and appreciating positive experiences as they occur, reminiscing involves looking back and savouring past experiences to evoke positive emotions in the present, and anticipating involves experiencing positive thoughts by imagining positive experiences that are to come (Bryant & Veroff, 2007). To test the assumption that savouring beliefs reflect actual savouring abilities, participants were administered a measure to assess savouring beliefs, and then randomly assigned to the present, reminiscing, or anticipating group. Each group was then asked to report frequency of thoughts and emotions regarding their Christmas vacation during, after or before the vacation, respectively. Results indicated that savouring belief scores on the corresponding subscales significantly predicted responses during, after, or before their vacation (Bryant, 2003). Initial research on savouring abilities has also indicated gender differences, with females (both women and girls) reporting a greater capacity to savour than males. (Bryant, 2003; Bryant, Smart, & King, 2005; Cafasso, Bryant, & Jose, 1994). These gender differences may be a result of women's heightened conscious awareness of their emotions compared

to men, and girls developing self-reflection capacities earlier than boys (Bryant & Veroff, 2007). Whether these gender differences remain consistent in older adulthood remains to be seen.

The other main savouring concept is savouring responses, which are the strategies that individuals use to influence their enjoyment of positive experiences. Some examples of savouring strategies are: counting blessings, sharing with others, and self-congratulating (Bryant & Veroff, 2007). However, the present study is interested in exploring individual differences in resiliency, EI self-perceptions, and beliefs about savouring ability, and as such, studying specific savouring responses are beyond the scope of this study.

1.5.1 Savouring Literature

While still a relatively new concept in the positive psychology area, several studies have already indicated potential benefits of savouring. Savouring is positively correlated with optimism, self-esteem, and happiness as well as negatively correlated with social and physical anhedonia, depression, hopelessness, and negative affect (Bryant, 2003). In terms of mental health outcomes, greater savouring beliefs predict greater subjective well-being (Ramsey & Gentzler, 2014), life satisfaction, (Bryant, 2003; Smith & Hollinger-Smith, 2015) increased happiness, and decreased depression (Smith & Hollinger-Smith, 2015). In addition to savouring beliefs, studies have looked at the effect of savouring exercises or interventions on mental health outcomes. For instance, participating in an exercise intended to promote savouring resulted in increased happiness (Schueller, 2010; Quoidbach, Dunn, Petrides, & Mikolajczak, 2010; Bryant & Veroff, 2007), decreased depression (Schueller, 2010), decreased depressive symptoms and

negative affect (Hurley & Kwon, 2012). Furthermore, savouring exercises appear to be more effective in increasing happiness and decreasing depression than a number of other positive psychology exercises (Schueller, 2010). In terms of physical health, only one study has examined the benefits of a savouring exercise on physical health, and to date, no study has examined the relationship between savouring beliefs and physical health. Burton and King (2004) found that individuals who participated in an exercise that asked them to write about positive experiences over the course of three days demonstrated improved physical health 4-6 weeks after completing the writing exercise. This finding suggests that practicing savouring techniques improves physical health, but the relationship with one's savouring beliefs has yet to be explored.

An interesting pattern has emerged in the savouring literature thus far. That is, savouring appears to have the greatest benefit when the individual is disadvantaged in some other aspect. For instance, a study comparing savouring beliefs to number of adversities experienced in the past found that individuals who experienced greater hardship in their past reported a greater ability to savour in the present (Croft, Dunn, & Quoidbach, 2013). This suggests that perhaps having experienced a number of negative events allows the individual to more greatly appreciate when good things happen. Secondly, a study of older adults found that while savouring predicted greater well-being, the benefit was greatest for adults with low levels of resiliency (Smith & Hollinger-Smith, 2015). This alludes to the idea that while engaging in savouring improves well-being for everyone, it provides the most benefit for people with fewer personal resources to draw on (e.g., low resiliency). Additionally, Hurley and Kwon (2013) found a significant interaction between savouring and positive affect. Results indicated that

savouring predicted increased positive affect, but only for people who experienced few daily “uplifts” (i.e., satisfying events), once again suggesting that savouring has the most benefit for people who are lacking benefits in other aspects of their lives. A final example of this trend was found in a study comparing savouring beliefs to wealth. A prime to think about money and self-reported current wealth both predicted savouring ability, such that participants who were wealthier and participants thinking about money reported less savouring ability (Quoidbach et al., 2010). This finding suggests that having greater wealth, or being reminded of wealth, potentially impairs one’s ability to savour, and furthermore, savouring is achievable even for the less wealthy. These findings have important implications for the benefits of savouring in populations that may be less advantaged, and in Canada, the elderly have been identified as one of the country’s vulnerable populations (Larkin, 2009). Given the literature demonstrating that something as simple as focusing on positive experiences provide numerous benefits, especially for those who are disadvantaged, and at a time when the elderly population is rapidly increasing (Statistics Canada, 2014), it seems that expanding the limited research looking at savouring in older adults would be valuable.

1.6 Rationale and Hypotheses

The extant emotion literature has demonstrated that positive emotions are related to resiliency (e.g., Sandel, 2008; Tugade & Fredrickson, 2004) and EI (e.g., Sandel, 2008; Gallagher & Vella-Brodrick, 2008; Mikolajczak et al., 2008) and are predictive of various mental health outcomes (Crawford & Henry, 2004; Stein et al., 1997). However, understanding *how* these positive emotions are utilized and what processes (e.g., savouring) help to elicit these positive emotions would be most helpful to improving the

study of resiliency and EI and their relationship to mental health. The primary aims of the present study are multi-fold. First, given the literature that demonstrates the mediating role of positive emotions (Ong et al., 2006; Cohn et al., 2009; Kong & Zhao, 2013) it seems likely that the process that generates positive affect (i.e., savouring) would also mediate the relationships between resiliency, EI, and mental health; however this model has yet to be studied. Next, while positive emotions are less frequently indicated as mediators in various relationships with physical health, they are predictive of a number of physical health outcomes (Pressman & Cohen, 2005). However, the relationship between savouring beliefs and physical health has yet to be explored. Furthermore, while gender differences in savouring beliefs in children, adolescents, and young adults have been demonstrated (Bryant, 2003; Bryant et al., 2005; Cafasso et al., 1994), these gender differences have yet to be assessed in older adults. In addition, while resiliency research in older adults is demonstrating renewed interest (Lavretsky & Irwin, 2007; Wild et al., 2013), EI remains significantly understudied in older adult populations and the relationship between EI and savouring has yet to be explored. The present study aims to fill these gaps in the literature.

A secondary aim of the present study is to explore the factor structure of a newly developed resiliency scale in an older adult population. The Resiliency Scale for Young Adults (RSYA; Prince-Embury et al., 2016) consists of three global factors that mirror the Three-Factor Model of Personal Resiliency (Prince-Embury, 2006, 2007). This three-factor model, which consists of Sense of Mastery, Sense of Relatedness, and Emotional Reactivity, has its theoretical basing in systems that are fundamental to development and are consistently indicated as important aspects of personal resiliency (Masten, 2001,

2007). Thus far, the three-factor model has demonstrated validity in child, adolescent, and young adult samples (Prince-Embury, 2006, 2007, 2008; Prince-Embury et al., 2016). Even though the three-factor model stems from the developmental resiliency literature, these three factors are important aspects of resiliency throughout the lifespan (Masten & Wright, 2009), and the intention is for the model to be applied longitudinally into adulthood (Prince-Embury et al., 2016). The present study is the first to utilize the RSYA in an older adult population.

Five hypotheses were proposed: (1) Resiliency, EI, and savouring will be positively related; (2) Women will demonstrate greater savouring beliefs than men; (3) Resiliency, EI, and savouring will independently predict physical health; (4) Savouring will mediate the relationship between EI and mental health; and (5) Savouring will mediate the relationship between resiliency and mental health. In addition, the factor structure of the RSYA will be explored for appropriate use in older adult samples.

CHAPTER 2: METHOD

2. Method

2.1. Participants

Participants were 149 adults (21 male; 55 female; 73 unspecified) 65 years of age or older. The average age was 73.72 years ($SD = 7.22$) with a range of 65-97 years. 64% of participants were married or in a domestic partnership, 21% were widowed, 9% were divorced, 4% were separated, and 2% were single and never married. Educational levels included 26% with a bachelor's degree, 10% with a master's degree, 14% had a professional or doctorate degree, 10% had a college diploma, and 16% had completed high school. The remaining 24% reported completing some partial level of education, or other unspecified education. The nationality of the sample consisted of 69% Canadian, 12% English, 3% French Canadian, and 16% other.

2.2. Measures

2.2.1. Savouring Beliefs

Savouring beliefs were measured using the Savoring Beliefs Inventory (SBI; Bryant, 2003). The SBI is a 24-item scale consisting of three 8-item subscales that measure personal beliefs about savouring abilities in the past (Reminiscing; e.g., "It's easy for me to rekindle the joy from pleasant memories"), Present Moment (e.g., "I feel fully able to appreciate good things that happen to me"), and future (Anticipating; e.g., "I feel a joy of anticipation when I think about upcoming good things"). Responses were made on a 7-point likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). All of the even numbered items were negatively worded and required reverse coding. Subscale scores were computed as means across the items and a total score was computed

by averaging all of the items. Higher scores indicated a stronger belief in one's ability to savour positive experiences.

The scale has demonstrated good internal consistency when used in an older population. A study of older adults aged 53-85 years, reported good reliability estimates for each subscale: Reminiscing ($\alpha = .83$), Anticipating ($\alpha = .84$), and Present Moment ($\alpha = .89$). Excellent reliability has been found for the total scores in the same population ($\alpha = .94$; Bryant, 2003; Smith & Hollinger-Smith, 2015). The SBI has demonstrated good convergent and discriminant validity. All three subscales and the total score are positively correlated with extraversion, optimism, and affect intensity, negatively correlated with hopelessness, neuroticism, and social anhedonia, and uncorrelated with social desirability responses (Bryant, 2003).

2.2.2. *Emotional Intelligence*

EI was measured using the Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002), which is based on the model proposed by Mayer, Salovey, and Caruso (2002). This 16-item scale consists of four, 4-item subscales that measure the following domains of trait EI: Self-emotion Appraisal (SEA) (e.g., "I have good understanding of my own emotions"), Others' Emotion Appraisal (OEA) (e.g., "I am sensitive to the feelings and emotions of others"), Use of Emotion (UOE) (e.g., "I would always encourage myself to try my best"), and Regulation of Emotion (ROE) (e.g., "I am able to control my temper and handle difficulties rationally"). Participants responded to a 7-item likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Subscale scores were computed as means across the items and a total score was computed by averaging all of the items. Higher scores indicated greater levels of trait EI. The WLEIS

has demonstrated good internal consistency, producing coefficient alphas ranging from $\alpha = .83-.89$ for SEA, $\alpha = .82-.92$ for OEA, $\alpha = .84-.89$ for UOE, and $\alpha = .76-.85$ for ROE. Estimates of internal consistency for the total EI score are excellent and range from .91 to .94 (Wong & Law, 2002; Sulaiman & Noor, 2015). The WLEIS is positively correlated with life satisfaction and other measures of EI such as the EQ-i (BarOn, 1997) thus demonstrating good convergent validity, while the four WLEIS factors are negatively correlated with powerlessness and uncorrelated with IQ supporting discriminant validity. Furthermore, the WLEIS demonstrates good incremental validity by predicting life satisfaction after controlling for personality factors (Wong & Law, 2002).

2.2.3. Resiliency

Resiliency was measured using the Resiliency Scale for Young Adults (RSYA; Prince-Embury et al., 2016). This measure is a 50-item scale consisting of three subscales and 10 facets that measure personal resiliency. The first subscale consists of 15 items that measure Sense of Mastery (e.g., “If I have a problem I can solve it”) and is made up of the following three facets: Adaptability, Self-efficacy, and Optimism. The second subscale consists of 20 items that measure Sense of Relatedness (e.g., “There are people who will help me if something bad happens”) and is made up of four underlying facets: Trust, Access to Support, Tolerance, and Comfort with Others. The final subscale consists of 15 items that measure Emotional Reactivity (e.g., “People say that I am easy to upset”) and is made up of the following three facets: Sensitivity, Recovery, and Impairment.

Participants responded to a 5-item likert scale ranging from 0 (*Never*) to 4 (*Almost always*). Facet scores were summed and may range from 0 to 20 and subscale scores were

computed as means across the underlying facets. Higher scores on the Sense of Mastery subscale, and Sense of Relatedness subscales indicated greater resiliency and lower scores on the Emotional Reactivity subscale indicated greater resiliency. To date, the majority of research looking at the relationship between resiliency and positive emotions has used a total resiliency score instead of breaking it down and looking at the constituent subscales (Sandel, 2008; Tugade & Fredrickson, 2004; Ong et al., 2006; Cohn et al., 2009; Fredrickson et al., 2003; Philippe et al., 2009). The Emotional Reactivity subscale of the RSYA is scored in such a way that it cannot be combined as part of a total score. Therefore, for the purpose of the present study's mediation analyses, a total *protective resiliency* score was computed by averaging across the subscale scores for Sense of Mastery and Sense of Relatedness.

Initial analyses of the RSYA have supported the factor structure proposed by Prince-Embury (2006, 2007) and has demonstrated excellent reliability for each subscale: Sense of Mastery ($\alpha = .89$), Sense of Relatedness ($\alpha = .91$), and Emotional Reactivity ($\alpha = .92$), demonstrating good internal consistency.

2.2.4. *Physical and Mental Health*

Both physical and mental health were measured using the Research and Development (RAND) 36-Item Short Form Health Survey (SF-36; Hays, Sherbourne, & Mazel, 1993). This measure is a 36-item scale that assesses eight health concepts: Physical Functioning (PF) (e.g., "The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much: Walking more than a mile?"), Role Limitations due to Physical Health (RLP) (e.g., "During the past 4 weeks, have you had any of the following problems with your work or

other regular daily activities as a result of your physical health? Had difficulty performing the work or other activities, for example, it took extra effort”), Pain (P) (e.g., “How much bodily pain have you had during the past 4 weeks?”), Energy/Fatigue (EF) (e.g., “These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. Did you feel worn out?”), Social Functioning (SF) (e.g., “During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?”), Emotional Well-being (EWB) (e.g., “These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling: Have you been a very nervous person?”), Role Limitations due to Emotional Problems (RLE) (e.g., “During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems, such as feeling depressed or anxious: Accomplished less than you would like”), and a General Health (GH) factor (e.g., “How true or false are each of the following statements for you: My health is excellent”).

Participants responded to items on a variety of likert scales ranging from 1 (*all of the time*) to 6 (*none of the time*), 1 (*definitely true*) to 5 (*definitely false*), 1 (*not at all*) to 5 (*extremely*), and 1 (*yes, limited a lot*) to 3 (*no, not limited at all*). Items were recoded to a score between 0 and 100 and each subscale was computed as an average across items; higher scores on all subscales indicated greater health. Based on preliminary analyses, it was determined that the total physical health subscale should be computed by averaging

scores across the P, PF, and RLP subscales. It was also determined that the total mental health subscale was to be computed by averaging across the EWB, EF, RLE, and SF subscales.

The SF-36 has demonstrated good internal consistency, producing coefficient alphas of $\alpha = .93$ for PF, $\alpha = .84$ for RLP, $\alpha = .78$ for GH, $\alpha = .85$ for SF, $\alpha = .90$ for EWB, and $\alpha = .83$ for RLE. Coefficient alphas for the remaining subscales have ranged from $\alpha = .78$ -.82 for P, and $\alpha = .86$ -.87 for EF (Hays et al., 1993; McHorney, Ware, Lu, & Sherbourne, 1994). The eight health concepts in this scale correlate with other frequently measured health concepts (e.g., sleep adequacy and cognitive functioning) (Ware, Kosinski, & Keller, 1994; Ware, Snow, Kosinski, & Gandek, 1993). Weinberger and colleagues (1991) reported that the SF-36 correlates with other health measures, specifically, the Sickness Impact Profile (Bergner, Bobbitt, Carter, & Gilson, 1981). Additionally, Krousel-Wood and Re (1994) found a correlation between the SF-36 and the Dartmouth COOP Charts (Nelson, Landgraf, Hayes, Wasson, & Kirk, 1990), another measure of physical, mental, and functional health. Furthermore, the eight health concepts have demonstrated predictive validity by predicting short-term (Stewart, Hayes, & Ware, 1988) and long-term (Ware et al., 1994) survival, depression progression (Beusterien, Steinwald, & Ware, 1996) and the use of health care services (Ware et al., 1994).

2.3. Procedure

The present study was approved by Western University's Research Ethics Board. Participants were recruited from retirement homes and community groups through the use of posters, emails, and in person recruitment, and were given the option of

completing either a paper or online version of the study. Participants who chose the paper version were given a complete study package, including all consent form documents and debriefing information and the packages were returned to the researcher upon completion. Participants who opted for the online version were provided a secure link to the online study on Qualtrics. Inclusion criteria regardless of the administration method (paper vs. online) required participants to be 65 years of age or older and not be manifesting any severe physical or cognitive impairment that would limit their ability to understand the study and respond to the various measures. Following completion of the study, participants were entered into a draw to win one of five Chapter's/Indigo gift cards as compensation for their participation. Participants did not express any concerns or difficulties completing the questionnaires.

2.4 *Data Analytic Strategy*

Four independent *t*-tests will be performed in IBM SPSS Statistics (21) to determine if there are any gender differences on the total savouring scores as well as each of the three time-oriented subscales (i.e., Present Moment, Reminiscing, and Anticipating).

Standard multiple regression analysis will be conducted in IBM Statistics SPSS (21) to test the hypothesis that EI, protective resiliency, and savouring would significantly predict physical health. Physical health will be regressed on the total EI scores, total savouring scores, and protective resiliency subscale scores.

Three path analyses will be conducted in AMOS 24 for IBM Statistics SPSS. The first will test the hypothesis that savouring mediates the relationship between EI and mental health; the second will test the hypothesis that savouring mediates the relationship

between resiliency and mental health; the third will assess the mediating relationship of savouring when both EI and resiliency are combined in one model. Mediation is present when an independent variable (e.g., EI or resiliency) predicts a mediator variable (e.g., savouring), which in turn predicts a dependent variable (e.g., mental health), and this indirect effect is significant (Preacher & Hayes, 2008; MacKinnon, Fairchild, & Fritz, 2007). The indirect effect is the product term of the two direct effects that it encompasses (i.e., $IV \rightarrow M$ and $M \rightarrow D$) (Hayes, 2013; Preacher & Hayes, 2008). To assess the significance of the indirect effect, bias-corrected bootstrapped confidence intervals with 10,000 resamples will be used. Bootstrapped confidence intervals have been suggested as a useful alternative to the normal theory mediation approach (i.e., Baron & Kenny's (1986) mediated regression analyses) because this approach does not make assumptions about the sampling distribution, allowing for more accurate detection of mediated effects (Preacher & Hayes, 2008; Shrout & Bolger, 2002). The bootstrap method for detecting indirect effects has also been deemed appropriate for smaller sample sizes (Efron & Tibshirani, 1993). If mediation is present, the 95% bias-corrected bootstrapped confidence interval will not contain zero, indicating that the indirect effect very likely differs significantly from zero (Wood, 2005; Shrout & Bolger, 2002; Preacher & Hayes, 2008). Additionally, 10,000 resamples was chosen as this value is consistently cited in the literature, and deemed sufficient due to the increase in accuracy being negligible when you go above this number (Wood, 2005; Hayes, 2013).

If significant mediated effects are found, the kappa-squared (k^2 ; Preacher & Kelley, 2011) effect size will be computed. K^2 is the maximum proportion of the indirect effect that could have occurred based on the constraints of the data (Preacher & Kelley,

2011). It is a value between 0 and 1 and is interpreted similarly to Cohen's (1988) suggestions for interpreting R^2 (i.e., small effect = .01; medium effect = .09; large effect = .25). It was decided to use k^2 because traditional mediation effect sizes (i.e., the Sobel test; Sobel, 1982) have been criticized for being unpredictable in small sample sizes (MacKinnon, Warsi, & Dwyer, 1995) and for overestimating small effects and underestimating large effects (MacKinnon et al., 1995; Preacher & Kelley, 2011). The effect sizes will be calculated using PROCESS 2.15 for IBM Statistics SPSS (21) (Hayes, 2013).

Lastly, an exploratory factor analysis (EFA) will be performed to assess the utility of the RSYA in an older adult sample. A Principal Axis Factor (PAF) extraction will be used with an oblique (Promax) rotation. An oblique rotation was chosen because it was anticipated that the three factors would correlate (Gorsuch, 1983). The EFA will be forced to three factors because this Three Factor Model of Personal Resiliency (Prince-Embury, 2006, 2007) has been confirmed in previous studies (Saklofske et al., 2013; Prince-Embury et al., 2016) and it is anticipated the same three-factor structure will replicate in this sample. Prior research has suggested that all factor loadings be presented in an EFA in order for researchers to make their own decisions about which loadings are considered large (Preacher & MacCallum, 2003). As such, all of the factor loadings will be presented, however, for purposes of interpretation in the present study, loadings will be considered large if they had an absolute value greater than .40. While a cutoff of .40 is arbitrary, it has been suggested that this cut off is sufficient for determining large loadings (Leech, Barrett, & Morgan, 2015).

CHAPTER 3: RESULTS

3. Results

3.1 Data Screening

Analysis of missing data indicated that only 0.62% of data points were missing, and as such a listwise deletion method was used. Kline (2011) suggested that if less than 5% of values are missing, the method of dealing with the missing data may make little difference. Standard data screening procedures were implemented using IBM SPSS Statistics (21). To assess multivariate normality, skewness and kurtosis were evaluated for all major study variables using the skew index (SI) and the kurtosis index (KI). Variables with $SI > 3.0$ are considered skewed (Curran, West, & Finch, 1997) and variables with $KI > 10.0$ suggest there are instances of kurtosis (Kline, 2011). None of the sample variables surpassed these recommended value cutoffs, indicating no instances of abnormal or extreme skewness or kurtosis (see Table 1). Mahalanobis distance (D^2) was used to detect multivariate outliers. D^2 is distributed as a chi-square distribution and any instances with a value greater than the critical value (i.e., $p < .001$) suggests that the participant is an outlier (Kline, 2011). No multivariate outliers were detected in this sample. Tolerance (i.e., $1 - R_{smc}^2$) and the Variance Inflation Factor (VIF) (i.e., $1/(1 - R_{smc}^2)$) were calculated to evaluate multicollinearity. Extreme multicollinearity is likely if Tolerance values are $< .10$ and if VIF is > 10.0 (Kline, 2011) and there were no instances of multicollinearity detected in the data for this study.

3.2 Preliminary Analyses

Means, standard deviations, Cronbach's alpha reliabilities, and measures of both skewness and kurtosis for all major study variables can be found in Table 1. Alpha

reliabilities for all variables ranged from adequate to good ($\alpha \geq .79$ with the exception of the “general health” subscale which was excluded from analyses) and were comparable to past research in this area. Bivariate correlations between all the subscales and total scores for all the major variables are presented in Table 2. As anticipated, protective resiliency, EI, and savouring were all significantly positively correlated.

3.2.1 Evaluating the Physical and Mental Health Factors

There are inconsistencies in the literature with respect to which items in particular comprise the total mental and physical health scales of the SF-36 (Hays et al., 1993); therefore, an EFA was performed to determine which items load on the physical and mental health scales in this particular sample. A principal axis factor (PAF) extraction with oblique rotation (Promax) was conducted on items 3-32 of the SF-36 with the number of factors fixed at two. Items 1 and 33-36 are considered “general health” items and item 2 is considered an indicator of health change (Hays et al., 1993) and as such, these items were excluded from the EFA. The Kaiser-Meyer-Olkin (KMO) index, a measure of sampling adequacy, was .86. KMO Values closer to 1 indicate that factor analysis would yield reliable results and values between .8 and .9 are considered “great” (Hutcheson & Sofroniou, 1999). Additionally, Bartlett’s test of sphericity (Bartlett, 1954), which tests to ensure the correlations between variables are significantly different from zero, was significant ($\chi^2 (435) = 2701.08, p < .001$). The correlation between the two factors was $r = .36$. The rotated factor loadings, communalities, eigenvalues, and percentage of variance explained are summarized in Table 3.

Factor 1 was labelled “Physical Health” as it was generally comprised of the items that made up the following subscales: Physical Functioning, Role Limitations due

to Physical Health, and Pain. Factor 2 was labelled “Mental Health” as it was comprised of the items that made up the following subscales: Role Limitations due to Emotional Problems, Energy/Fatigue, Emotional Well-Being, and Social Functioning. Only two items were eliminated. The first item, “During the past 4 weeks, have you had any problems with the following as a result of your physical health: Cut down the amount of time you spent on work or other activities?” was eliminated because it failed to meet the .40 cutoff. The second item, “During the past 4 weeks, have you had any problems with the following as a result of your physical health: Accomplished less than you would like?” was eliminated because it cross-loaded on both the mental and physical health factor suggesting some ambiguity in the interpretation. The total physical health score was computed by averaging the 14 items that loaded highly on factor 1, and the total mental health score was computed by averaging the 14 items that loaded highly on factor 2.

3.3 *Factor Structure of the RSYA*

To assess the utility of the RSYA in an older adult population, an EFA was performed. A PAF extraction with oblique rotation (Promax) was conducted on all 50 items of the RSYA with the number of factors fixed at three. A preliminary EFA where a three-factor solution was not forced showed there was little difference in the factor structure in comparison to a forced factor analysis. This provided further support for the decision to force the factors into a three-factor representation of resiliency following Prince-Embury’s (2006, 2007) model. This three-factor structure is currently supported with both children (Prince-Embury, 2006) and young adults (Prince-Embury et al., 2016). The KMO was .83 indicating that the factor analysis would yield reliable results.

Additionally, Bartlett's test of sphericity (Bartlett, 1954) was significant ($\chi^2 (1225) = 3928.91, p < .001$), indicating the correlations between variables are significantly different from zero. The correlation between Sense of Relatedness and Emotional Reactivity was $r = -.37$, the correlation between Sense of Mastery and Emotional Reactivity was $r = -.45$, and the correlation between Sense of Relatedness and Sense of Mastery was $r = .67$. The rotated factor loadings, communalities, eigenvalues, and percentage of variance explained are summarized in Table 4.

Generally, the EFA suggested a similar 3-factor structure in an older adult sample as has been demonstrated in a young adult sample (Prince-Embury et al., 2016). Factor 1 was labelled Sense of Relatedness, factor 2 was labelled Emotional Reactivity, and factor 3 was labelled Sense of Mastery. However, the results suggest some significant inconsistencies with the factor loadings on numerous items on the Sense of Mastery and Sense of Relatedness scales. A pattern emerged showing that items that have historically loaded on the Sense of Relatedness subscale in a young-adult sample were instead loading on the Sense of Mastery subscale in the present sample, and vice versa. For instance, "I can forgive my family if they upset me"; "There are people who will help me if something bad happens"; "I don't hold grudges against those who upset or hurt me"; "If I get upset or angry there is someone I can talk to"; and "My family or friends will help me if something bad happens to me" load on the Sense of Mastery subscale in the present study's analyses. However, these items are all considered Sense of Relatedness items when used in a young adult sample. Furthermore, the items "I always try and look on the bright side"; "I look for the good in life"; and "My life will be happy" load on the Sense of Relatedness subscale in the present study, but belong on the Sense of Mastery subscale

in young adult samples. The overlap between these two subscales provided further support for the decision to use a total protective resiliency score instead of evaluating the factors individually.

To further illustrate this pattern, several items cross-loaded on both the Sense of Mastery and Sense of Relatedness subscales including “I always try and look on the bright side”; “I welcome changes to my life”; “I look for the ‘good’ in life”; “If I get upset or angry there is someone I can talk to”; “I can ask for help when I need to”; and “My family and friends will help me if something bad happens to me”. While the Emotional Reactivity factor was stable, the Sense of Mastery and Sense of Relatedness factors had several cross-loading items. These findings suggest that mastery and relatedness may manifest differently in older adults and that certain items may need to be modified before the RSYA can be a valid measure of resiliency in this population.

3.4 *Gender Differences in Savouring Beliefs*

To test the hypothesis that women would report greater savouring beliefs than men, four independent samples *t*-tests were performed comparing men and women’s scores on Present Moment, Reminiscing, Anticipating, and total savouring scores. It should be noted that a substantial percentage of participants did not report their gender and therefore the sample size for this analysis was $N = 76$ (55 women and 21 men). As such, these results should be interpreted with caution.

3.4.1 *Savouring the Present Moment*

Levene’s test for homogeneity of variance was not significant $F = .40, p = .532$, indicating the assumption of equal variances was not violated. Savouring the moment beliefs did not significantly differ between women ($M = 5.86, SD = .88$) and men ($M =$

5.42, $SD = 1.11$), $t(74) = 1.85$, $p = .069$. The effect size, as assessed by η^2 , was .04. The 95% CI for the mean differences had a lower bound of -.04 and an upper bound of .94. Contrary to the hypothesis, women did not report greater savouring beliefs compared to men on the Present Moment subscale.

3.4.2 *Reminiscing*

Levene's test for homogeneity of variance was not significant $F = 2.27$, $p = .136$, indicating the assumption of equal variances was not violated. The Reminiscing subscale scores were significantly different for women ($M = 5.85$, $SD = 1.01$) and men ($M = 5.29$, $SD = 1.35$), $t(74) = 2.00$, $p = .05$. The effect size, as assessed by η^2 , was .05. The 95% CI for the mean differences had a lower bound of .00 and an upper bound of 1.14. In support of the hypothesis, women reported greater savouring beliefs compared to men on the Reminiscing subscale.

3.4.3 *Anticipating*

Levene's test for homogeneity of variance was not significant $F = 2.74$, $p = .102$, indicating the assumption of equal variances was not violated. Anticipating scores were significantly different for women ($M = 5.89$, $SD = .87$) than for men ($M = 5.35$, $SD = 1.12$), $t(74) = 2.24$, $p = .028$. The effect size, as assessed by η^2 , was .06. The 95% CI for the mean differences had a lower bound of .06 and an upper bound of 1.03. In accordance with the hypothesis, women reported greater savouring beliefs than men on the Anticipating subscale.

3.4.4 *Total Savouring*

Levene's test for homogeneity of variance was not significant $F = 2.19$, $p = .143$, indicating the assumption of equal variances was not violated. Total savouring scores

were significantly different between women ($M = 5.87$, $SD = .84$) and men ($M = 5.35$, $SD = 1.12$), $t(74) = 2.21$, $p = .031$. The effect size, as assessed by η^2 , was .06. The 95% CI for the mean differences had a lower bound of .05 and an upper bound of .99. Also in support of the hypothesis, women reported greater total savouring beliefs than men.

3.5 *EI, Resiliency, and Savouring as Predictors of Physical Health*

To test the hypothesis that EI, protective resiliency, and savouring predict physical health, a multiple regression was performed. Total physical health scores were regressed on EI total score, protective resiliency total score, and savouring total score. A standard multiple regression was performed with all of the variables entered simultaneously. The overall regression model with all three predictors did not predict a significant proportion of variance of physical health $R^2 = .01$, $F(3, 143) = .65$, $p = .583$. The standardized beta weights are summarized in Table 5. Together, EI, protective resiliency, and savouring did not predict physical health in this sample.

3.6 *The EI, Savouring, Mediation Model*

A path analysis was performed to test the hypothesis that savouring would mediate the relationship between EI and mental health. As hypothesized, savouring significantly mediated the relationship between EI and mental health (see Table 6). If the direct effect decreases but remains significant once the mediator is added to the model there is said to be partial mediation (Baron & Kenny, 1986). After savouring was added to the model, the direct effect between EI and mental health was still significant, although less significant than prior to the addition of savouring indicating partial mediation (see Figure 1). A medium effect size was found ($k^2 = .15$).

3.7 *The Resiliency, Savouring, Mediation Model*

A second path analysis was performed to test the hypothesis that savouring would mediate the relationship between protective resiliency and mental health. As hypothesized, savouring significantly mediated the relationship between protective resiliency and mental health (see Table 7). When the direct effect is no longer significant after the mediator is added to the model, there is said to be full mediation (Baron & Kenny, 1986). After savouring was added to the model, the direct effect between protective resiliency and mental health was no longer significant indicating full mediation (see Figure 2). A medium effect size was found ($k^2 = .16$).

3.8 *The EI, Resiliency, Savouring, Mediation Model*

A third path analysis that combined the protective resiliency mediation model and the EI mediation model was performed in order to assess the unique contribution of EI and protective resiliency on mental health with savouring as a mediator. Similarly to the previous path analysis, savouring fully mediated the relationship between protective resiliency and mental health. However, when protective resiliency and EI were combined in one model, EI no longer significantly predicted mental health, and savouring no longer significantly mediated the relationship between EI and mental health (see Table 8). This suggests that savouring does not mediate the relationship between the unique EI variance (i.e., the aspects of EI that do not share overlap with protective resiliency) and mental health, and that the partial mediation observed in the first model was likely due to the shared variance between EI and protective resiliency (see Figure 3). Therefore, on its own, EI significantly predicts mental health, but when protective resiliency is added to

the model, EI is no longer a significant predictor; this suggests that the mental health benefits associated with EI share considerable overlap with resiliency.

3.9 *Post-hoc Analyses*

After analyzing the combined protective resiliency, EI, and savouring mediation model, a post-hoc decision was made to perform further regression analyses to determine the unique contribution of EI on savouring. Given that savouring no longer mediated the EI-mental health relationship once protective resiliency was added to the model, it warranted further analyses to determine which factors of EI contributed to savouring beliefs, and which factors merely shared conceptual overlap with protective resiliency. Total savouring scores were regressed on the four EI subscales: Self-Emotion Appraisal, Others' Emotion Appraisal, Use of Emotion, and Regulation of Emotion subscales. A standard multiple regression was performed with all of the variables entered simultaneously. The overall regression model with all four subscales predicted a significant proportion of variance of savouring $R^2 = .26$, $F(4, 142) = 12.55$, $p < .001$. The unique contribution of each subscale is summarized in Table 9. Only the Self-Emotion Appraisal and the Use of Emotion subscales significantly predicted savouring in the present sample.

CHAPTER 4: DISCUSSION

4. Discussion

The first purpose of this study was to evaluate the psychometric integrity of the RSYA (Prince-Embury et al., 2016) in an older adult sample. The results for this older sample of adults generally support the three-factor structure initially proposed by Prince-Embury (2006, 2007). However, two of the factors (i.e., Sense of Relatedness and Sense of Mastery) did show considerable overlap in the factor structure, suggesting that some of the items warrant further review, and may require revision before continued use with older adults. It may also suggest that unique resiliency factors observed in earlier years may “blend” overtime. Both Relatedness and Mastery are key protective factors and it is possible that the two may become more connected with age.

Factor analysis of the RSYA in an older adult sample yielded interesting results. Several of the Sense of Relatedness items (e.g., “My family or friends will help me if something bad happens to me”) either cross-loaded or loaded higher on the Sense of Mastery factor. Likewise, several of the Sense of Mastery items (e.g., “I welcome changes to my life”) either cross-loaded or loaded higher on the Sense of Relatedness factor. The most interesting finding of this factor analysis centered around the “Access to Support” facet of the Sense of Relatedness factor. Four out of five of these items that, in younger adults load on Sense of Relatedness, loaded higher on Sense of Mastery in the present sample, and the fifth item cross-loaded on both factors. These results suggest that perhaps *mastery* manifests differently in older adults compared to younger adults, and that certain aspects of *relatedness* (i.e., access to support) are closely tied to mastery in seniors. At a time when many older adults begin to lose their independence and become

more reliant on others, perhaps having friends and family to rely on allows these individuals to maintain a sense of control, and to feel like they are still capable of achieving their goals, provided they have the help of others.

In the present study, gender differences were measured pertaining to overall savouring beliefs, as well as on the Reminiscing, Present Moment, and Anticipating subscales (Bryant, 2003). Consistent with the initial hypothesis, women reported greater savouring beliefs than men on the total, Reminiscing and Anticipating subscales, but not for the Present Moment subscale. These results generally mirror the findings of the few existing studies that have examined gender differences in savouring beliefs in younger and middle-aged adults (Bryant, 2003; Bryant et al., 2005; Cafasso et al., 1994). Given that the research suggests women have a greater heightened awareness of their emotions (Wood, Rhodes, & Whelan, 1989), it is unsurprising that older women report greater overall savouring ability than men. However, in the present sample, men and women did not differ on savouring in the moment. Studies have demonstrated that women partake in greater productive daydreaming (Huba, Aneshensel, & Singer, 1981) and spend more time recalling past memories (Bryant, Morgan, & Perloff, 1986) compared to men, and this may explain the differences on the Reminiscing and Anticipating subscales. When experiencing positive events or emotions in the present, older men and women are equally able to savour; however, perhaps due to differences in daydreaming and reminiscing, men demonstrate a decreased capacity to savour past or future experiences to the same extent.

This study also examined savouring, along with protective resiliency and EI as predictors of physical health. Contrary to hypotheses, none of these variables

significantly predicted physical health in the present sample; however, there are a number of possible explanations for this finding. The SF-36 (Hays et al., 1993) primarily measures functional physical health, that is, the capability of doing several tasks that healthy adults should be able to accomplish (e.g., bending, kneeling, or stooping). Activities like these may prove to be difficult for older adults, not because they are physically unhealthy, but because of the normal aging process. Additionally, two items asked respondents about bodily pain, another unfortunate aspect of aging many people endure. Chronic pain is often experienced by older adults (Helme & Gibson, 2001) however, it may not be indicative of actual physical health. Furthermore, Thomas, Peat, Harris, Wilkie, and Croft (2004) found that pain increasingly interferes with everyday tasks as people age. Therefore, asking older adults if they “were limited in the kind of work or other activities” that they performed, may not truly be indicative of physical health insomuch as it indicates the increasing pain felt as one ages.

The several studies that have reported a relationship between resiliency, EI, positive emotions, and physical health primarily assessed *specific* examples of physical health. For example, resiliency is associated with improved diabetes maintenance (Yi et al., 2008) and faster cardiovascular recovery from stress (Tugade, 2001). However, similar to the present study, when resiliency was compared to *general* physical health in older adults, there was no association between resiliency and physical health (Nygren et al., 2005). A similar pattern of findings can be seen in the literature between EI and physical health. EI is associated with menopausal symptom severity (Bauld & Brown, 2009) and specific autoimmune diseases (Monselise et al., 2013), however any associations between EI and general health have only been found with young or middle-

aged adults (Extremera & Fernandez-Berrocal, 2002; Extremera & Fernandez-Berrocal, 2006). Lastly, the relationship between positive emotions and physical health has also been studied primarily with specific physical diseases such as cancer (Levy et al., 1988), AIDS (Moskowitz, 2003), and stroke (Ostir et al., 2001). One longitudinal study of older adults found that positive affect predicted performance of activities of daily living 2 years later; however the sample reported *zero* difficulty with activities of daily living at baseline (Ostir et al., 2000). This suggests that perhaps positive affect works preventatively, but may not do much to improve physical health in a sample where physical decline may have already set in.

Finally, three independent path analyses were conducted to assess the mediating effects of savouring in the relationships between protective resiliency, EI, and mental health. The decision to first assess the mediation models separately rather than together was due to the high correlation between protective resiliency and EI in the present study (i.e., $r = .67$), as well as other studies that have found equally high correlations between EI and resiliency (Prince-Embury et al., 2016; Ravikumar & Dhamodharan, 2014). As hypothesized, when evaluated independently, savouring fully mediated the relationship between protective resiliency and mental health. Savouring also partially mediated the relationship between EI and mental health. However, when the two models were combined, savouring continued to mediate between protective resiliency and mental health, but was no longer a significant mediator between EI and mental health. In other words, once individual differences in resiliency were controlled for, EI was no longer a significant predictor of mental health. Apart from the literature indicating resiliency and EI are highly correlated, this overlap between resiliency and EI has been suggested before

when Tugade and Fredrickson (2002) suggested that perhaps being emotionally intelligent is one aspect of resiliency. Furthermore, the literature demonstrates that older adults are less adept at recognizing emotions in faces (Phillips et al., 2002) and therefore, perhaps EI is not as predictive of mental health as resiliency is in this population. These findings provide partial support for Fredrickson's (1998, 2001, 2004) Broaden and Build Theory of positive emotions; the "broadening" effect of positive emotions was demonstrated, through the protective resiliency-savouring-mental health link but the "undoing" effect of negative emotions through the EI-savouring-mental health link was not supported.

The significant indirect effect between protective resiliency and mental health in the combined model suggests that savouring works to "broaden" our thought-action repertoires which in turn increases resiliency by improving personal resources, helping to explain the protective link between resiliency and mental health. These findings mirror the results of previous studies that have found *state* positive emotions (i.e., positive emotions or affect felt during a specific period of time) mediate the relationship between resiliency and various outcomes (Cohn et al., 2009; Ong et al., 2006; Fredrickson et al., 2003). This finding demonstrates that greater savouring provides the same benefits as state positive affect, presumably by being able to prolong positive feelings in the present, being able to recall positive emotions and experiences from the past, or by anticipating future positive experiences. This has potential implications for therapeutic interventions and everyday life. Being able to savour allows the benefits of positive emotions to be utilized even when not presently experiencing something positive. The simple act of focusing more closely on positive experiences can help cultivate positive emotions, make

them last longer, and provide something beneficial to draw on when not currently experiencing something positive, which in turn, helps to improve mental health.

On the other hand, this model did not support the “undoing” effect of negative emotions; that is, the experience of positive emotions helps to undo our specific action tendencies associated with negative emotions by improving emotion regulation (Fredrickson, 1998, 2001, 2004). While savouring helps to *broaden* our action tendencies, perhaps only specific feelings of state positive emotions, as opposed to a general disposition towards enhancing positive experiences (i.e., savouring), work to *undo* negative action tendencies. Previous studies looking at the mediating effect of positive emotions have primarily used a measure of state positive affect (Kong et al., 2012; Kong & Zhao, 2013; Kafetsios & Zampetakis, 2008; Palomera & Brackett, 2006). Previous research and the present study’s results suggest that perhaps in order to undo negative action tendencies, it is necessary for an individual to experience positive emotions in that moment. In other words, the ability to savour may help to cultivate positive emotions during neutral experiences; however, during negative experiences, specific positive affect may be required to undo negative action tendencies. Future research should examine the relationship between savouring and state positive affect during periods of negative emotionality to further understand this “undoing” effect of positive emotions.

While the combined model suggests that savouring does not provide the same undoing effects as state positive emotions, the individual path analyses showed that savouring partially mediated the relationship between EI and mental health prior to the addition of protective resiliency. As such, this led to the post hoc analysis to determine

which aspects of EI could be predicted by savouring beliefs. The Self-Emotion Appraisal (SEA) and Use of Emotion (UOE) subscales significantly predicted savouring beliefs, but the Regulation of Emotion (ROE) and Others' Emotion Appraisal (OEA) subscales did not. This lends further support to the contention that emotion regulation may not be as related to savouring as it is to state positive emotions. Savouring beliefs are an indication of one's belief in their ability to focus on positive experiences and the extent to which they can control these positive emotions; as such we would expect SEA and UOE to predict savouring beliefs. On the other hand, savouring beliefs are concerned with personal positive experiences and therefore we might expect a smaller association between savouring and the emotions of others. Lastly, Bryant (1989) has indicated that savouring positive experiences is unique from coping with negative experiences, and therefore may have little to do with emotion regulation. This is confirmed by the smaller correlations found between savouring and the OEA and ROE subscales compared to savouring and the SEA and UOE subscales in the present study.

4.1 Limitations and Future Directions

Limitations of the present study should be noted. The factor analysis of the RSYA in this sample suggests that some of the items, specifically, those defining the facet Access to Support, need to be revised to reflect the observed overlap between relatedness and mastery in older adults, in contrast to preliminary studies with younger adults (Prince-Embury et al., 2016). Future research should endeavor to validate the RSYA for use with an older adult population. Furthermore, as the RSYA may require adjustments for use with seniors, future research should test the resiliency-savouring-mental health

model using other resiliency scales that have been previously validated for use with older adults.

Another limitation of the present study concerns the lack of socioeconomic and cultural variability in the present sample. Several studies have demonstrated a link between mental health and socioeconomic status (SES), with lower SES being associated with decreased mental health (Fryers, Melzer, & Jenkins, 2003; Carter, Blakely, Collings, Gunasekara, & Richardson, 2009; Zimmerman & Bell, 2006). Furthermore, research on savouring suggests that wealth plays a role in the relationship between savouring and happiness, such that less wealthy individuals are better able to savour (Quoidbach et al., 2010). While data on SES was not directly collected in the present study, based on the levels of education reported and the locations in which the data was collected, it is probable that the majority of the sample were of relatively mid-to-high SES, compared to a more diverse community sample. This sample was mainly recruited from a retirement home, and from a community program that was affiliated with this retirement home and the University of Western Ontario. Additionally, research suggests there are cultural differences in the ways people savour positive experiences (Miyamoto & Ma, 2011). Therefore, future research conducted on the resiliency-savouring-mental health model should aim to include a more socioeconomically and culturally diverse sample in order to appropriately generalize the results to older adults of other economic and cultural backgrounds.

A third limitation of the present study would be the unusual gender reporting. For unknown reasons, only 51% of the sample reported their gender; those who did not report their gender were all participants who completed the study online. The reasons for which

these participants did not report their gender are unclear; however, given that the gender reporting decreased only for online participants, one hypothesis was that there was some trepidation about providing personal information through online studies. Or, perhaps by offering an opened-ended question as opposed to providing a forced-choice between “male” and “female” created some confusion. Due to this significant drop in the sample size, it was unwise to examine gender differences in the relationship between EI, resiliency, savouring, and mental and physical health. Considering the significant gender differences found for savouring beliefs in both the present study and a number of past studies (Bryant, 2003; Bryant et al., 2005; Cafasso et al., 1994), future research should examine the model separately for males and females.

Finally, a fourth limitation would be the correlational nature of the present study. Future studies should implement experimental designs to further explore the relationship between savouring and mental health. Furthermore, studies that examine savouring would benefit from a mixed-methods approach. Qualitative analysis would provide a much richer understanding of how individuals savour their positive experiences, and would nicely complement any quantitative results.

An additional avenue for future research would be to examine this savouring model in “clinical” populations. Though the present sample was restricted to a sample of non-clinical older adults, the results are promising, and warrant further exploration of this savouring model in specific clinical populations.

4.2 *Concluding Remarks*

The present study is the first of its kind to assess whether savouring mediates the relationships between protective resiliency, EI, and mental health, similarly to the way

positive emotions play a mediating role in these relationships. In accordance with the hypotheses, savouring mediated the relationship between protective resiliency and mental health, suggesting that the process through which positive emotions are focused on provides benefits even with the absence of a specific positive event. Although, contrary to hypotheses, savouring did not mediate the relationship between EI and mental health once protective resiliency was added to the model, demonstrating that the mental health benefits of EI, and its relation to savouring, share considerable overlap with resiliency in older adults.

An additional goal of this study was to assess the utility of the RSYA in an older adult sample. While the three-factor structure remained, Sense of Mastery and Sense of Relatedness appear to be closely related in older adults, and certain items require adaptation before the scale can be a valid measure of resiliency in older adults. Further, the present study was the first to assess whether savouring predicts physical health. There was no indication that savouring, protective resiliency, or EI predicts physical health in this older adult sample, perhaps due to the overall increase in declining physical functioning and pain experienced among this population. Despite the limitations, the present study has provided some encouraging findings in support of savouring positive experiences as one of the mechanisms by which resilient older individuals experience improved mental health.

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Table 1.

Descriptive Statistics

Variable	<i>M</i>	<i>SD</i>	α	<i>Skewness</i>	<i>Kurtosis</i>
<i>SF-36 Subscales</i>					
Physical Functioning	76.99	24.17	.92	-1.29	.70
Physical Limitations	75.84	35.64	.86	-1.25	.06
Pain	74.06	21.45	.83	-.77	-.03
Energy/Fatigue	67.81	17.29	.84	-.84	.76
Emotional Well-being	83.01	13.31	.82	-1.54	3.79
Social Functioning	82.09	17.08	.79	-2.04	4.89
Emotional Limitations	86.02	30.64	.86	-2.05	2.74
General Health	73.52	16.25	.68	-.61	.57
Total Physical Health	75.21	21.82	.93	-1.14	.50
Total Mental Health	79.16	14.31	.88	-1.61	2.60
<i>WLEIS Subscales</i>					
Self emotion Appraisal	6.02	.79	.88	-.98	.98
Others' emotion Appraisal	5.45	.93	.90	-.61	.80
Use of Emotion	5.78	.93	.83	-1.08	1.97
Regulation of Emotion	5.66	.97	.88	-1.37	4.02
Total Emotional Intelligence	5.73	.72	.92	-.97	1.71
<i>SBI Subscales</i>					
Anticipating	5.80	.96	.88	-.76	.13
Savouring the Moment	5.78	.95	.85	-.91	1.02
Reminiscing	5.77	1.01	.86	-1.00	1.08
Total Savouring	5.78	.90	.95	-.75	.43
<i>RSYA Subscales</i>					
Sense of Mastery	16.06	2.40	.91	-.50	-.35
Sense of Relatedness	15.72	2.47	.91	-.55	-.07
Emotional Reactivity	5.68	2.41	.89	.62	1.05
Total Protective Resiliency	15.87	2.29	.94	-.52	-.05

Note. *M* = Mean; *SD* = Standard Deviation; α = Cronbach's alpha.

SF-36 responses range from 0 to 100; WLEIS responses range from 1 to 7; SBI responses range from 1 to 7; RSYA responses range from 0 to 20.

Table 2.

Bivariate Correlations between Emotional Intelligence, Savouring, Resiliency, Mental Health, and Physical Health

	1	2	3	4	5	6	7	8	9	10
1. Self Emotion Appraisal	1.00									
2. Others' Emotion Appraisal	.65**	1.00								
3. Use of Emotion	.55**	.45**	1.00							
4. Regulation of Emotion	.59**	.54**	.39**	1.00						
5. Total EI	.85**	.82**	.75**	.79**	1.00					
6. Anticipating	.38**	.34**	.30**	.26**	.40**	1.00				
7. Savouring the Moment	.56**	.40**	.41**	.41**	.55**	.82**	1.00			
8. Reminiscing	.36**	.26**	.44**	.28**	.42**	.80**	.74**	1.00		
9. Total Savouring	.47**	.36**	.42**	.34**	.49**	.94**	.92**	.92**	1.00	
10. Sense of Mastery	.59**	.54**	.58**	.53**	.70**	.48**	.61**	.58**	.60**	1.00
11. Sense of Relatedness	.51**	.53**	.37**	.43**	.57**	.58**	.62**	.55**	.63**	.75**
12. Emotional Reactivity	-.46**	-.25**	-.34**	-.62**	-.53**	-.33**	-.50**	-.35**	-.43**	-.34**
13. Total Protective Resiliency	.58**	.57**	.49**	.50**	.67**	.57**	.66**	.60**	.66**	.91**
14. Total Mental Health	.48**	.16*	.36**	.25**	.38**	.33**	.48**	.37**	.43**	.42**
15. Total Physical Health	.16	.08	.07	.07	.12	.14	.13	.08	.13	.12

Note. ** $p < .01$, * $p < .05$

Table 2. (Continued)

Bivariate Correlations between Emotional Intelligence, Savouring, Resiliency, Mental Health, and Physical Health

	11	12	13	14	15
11. Sense of Relatedness	1.00				
12. Emotional Reactivity	-.34**	1.00			
13. Total Protective Resiliency	.95**	-.40**	1.00		
14. Total Mental Health	.32**	-.50**	.39**	1.00	
15. Total Physical Health	.15	-.15	.15	.47**	1.00

Note. ** $p < .01$, * $p < .05$

Table 3.

Summary of Exploratory Factor Analysis Results for SF-36 using Principal Axis Extraction and Promax Rotation (N= 126)

	Factor Loadings		Communalities
<i>Item</i>	Physical Health	Mental Health	
<i>The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?</i>			
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	.55	.16	.39
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	.81	-.13	.60
Lifting or carrying groceries	.82	-.15	.61
Climbing several flights of stairs	.78	-.05	.57
Climbing one flight of stairs	.86	-.13	.68
Bending, kneeling, or stooping	.65	-.03	.41
Walking more than a mile	.81	-.04	.63
Walking several blocks	.89	-.24	.70
Walking one block	.85	-.27	.63
Bathing or dressing yourself	.41	-.03	.16
<i>During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?</i>			
Cut down the amount of time you spent on work or other activities	.37	.30	.31
Accomplished less than you would like	.28	.46	.39
Were limited in the kind of work or other activities	.60	.17	.46
Had difficulty performing the work or other activities (for example, it took extra effort)	.54	.27	.46
How much bodily pain have you had during the past 4 weeks?	.47	.30	.42
During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?	.60	.18	.47
<i>During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?</i>			
Cut down the amount of time you spent on work or other activities	-.13	.74	.50
Accomplished less than you would like	-.09	.69	.43

Note. Factor loadings above .40 appear in bold.

Table 3. (Continued)

Summary of Exploratory Factor Analysis Results for SF-36 using Principal Axis Extraction and Promax Rotation (N=126)

<i>Item</i>	Factor Loadings		Communalities
	Physical Health	Mental Health	
Didn't do work or other activities as carefully as usual	-.08	.67	.42
During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?	.26	.58	.51
<i>These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling.</i>			
Did you feel full of pep?	.34	.53	.52
Have you been a very nervous person?	-.06	.51	.24
Have you felt so down in the dumps that nothing could cheer you up?	-.21	.68	.41
Have you felt calm and peaceful?	-.11	.70	.45
Did you have a lot of energy?	.33	.53	.52
Have you felt downhearted and blue?	-.23	.76	.51
Did you feel worn out?	.22	.46	.33
Have you been a happy person?	-.20	.53	.25
Did you feel tired?	.20	.52	.38
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?	.23	.50	.39
<i>Eigenvalues</i>	9.51	4.21	
<i>% of variance</i>	31.70	14.04	

Note. Factor loadings above .40 appear in bold.

Table 4.

Summary of Exploratory Factor Analysis Results for Resiliency Scale for Young Adults using Principal Axis Extraction and Promax Rotation (N= 123)

<i>Item</i>	Factor Loadings			Communalities
	Sense of Relatedness	Emotional Reactivity	Sense of Mastery	
People know who I really am.	.46	-.16	.11	.38
I like people.	.89	.03	-.12	.66
If something bad happens I can ask my friends for help.	.46	.14	.28	.40
I can let others see my real feelings.	.50	.37	.26	.40
I look for the “good” in life.	.40	-.06	.38	.54
I can meet new people easily.	.96	.13	-.26	.62
I can trust others.	.70	-.07	-.11	.43
If people let me down I can forgive them.	.44	.04	.25	.38
I can be myself around others.	.87	-.04	-.10	.67
I can make friends easily.	.89	.08	-.15	.60
People accept me for who I really am.	.51	-.21	.07	.46
I feel calm with people.	.62	-.26	-.10	.47
People like me.	.62	-.07	.10	.51
My life will be happy.	.39	-.17	.26	.48
I always try and look on the bright side.	.31	-.30	.25	.48
I can ask for help when I need to.	.39	.23	.39	.42
People say that I am easy to upset.	-.24	.41	.05	.26
My feelings are easily hurt.	-.38	.52	.31	.35

Note. Factor loadings above .40 appear in bold.

Table 4. (Continued)

Summary of Exploratory Factor Analysis Results for Resiliency Scale for Young Adults using Principal Axis Extraction and Promax Rotation (N= 123)

<i>Item</i>	Factor Loadings			Communalities
	Sense of Relatedness	Emotional Reactivity	Sense of Mastery	
When I get upset, I stay upset for about a week.	.22	.60	.02	.31
I can get so upset that I can't stand how I feel.	.04	.64	.01	.39
When I get upset, I react without thinking.	.10	.71	-.04	.49
When I am upset, I make mistakes.	-.00	.60	.18	.29
When I get upset, I stay upset for the whole day.	.20	.62	-.13	.39
I get so upset that I lose control.	-.03	.68	-.10	.56
When I get upset, I don't think clearly.	.03	.56	-.03	.32
When I am upset, I do things that I later feel bad about.	-.19	.67	.03	.54
I get very upset when things don't go my way.	-.16	.52	.01	.35
When I get upset, I stay upset for about a month.	-.06	.59	.17	.30
When I get upset, I stay upset for several days.	.13	.67	-.09	.44
When I'm upset it is hard for me to recover.	.06	.62	-.09	.42
It is easy for me to get upset.	.00	.50	-.22	.39
I can make major changes in my life when I need to.	.02	-.10	.50	.32
If I have a problem I can solve it.	-.21	-.12	.69	.40

Note. Factor loadings above .40 appear in bold.

Table 4. (Continued)

Summary of Exploratory Factor Analysis Results for Resiliency Scale for Young Adults using Principal Axis Extraction and Promax Rotation (N= 123)

<i>Item</i>	Factor Loadings			Communalities
	Sense of Relatedness	Emotional Reactivity	Sense of Mastery	
I welcome changes in my life as chances to grow.	.28	.04	.47	.44
I do things well.	-.05	.01	.51	.23
I find meaning in hardships that come my way.	-.10	.12	.73	.40
I can overcome life crises that come my way.	.04	.00	.68	.50
I view obstacles as challenges to overcome.	.06	.11	.75	.56
I can make up with friends after a fight.	.16	-.02	.52	.42
I feel I'm in control of my life.	.09	-.20	.51	.47
I am good at figuring things out.	-.24	-.16	.56	.27
No matter what happens, things will be all right.	.11	-.11	.44	.33
I am able to resolve conflicts with others.	.14	-.12	.53	.49
I try to be positive.	.16	-.17	.50	.50
I welcome changes to my life.	.45	.29	.46	.56
I can forgive my family if they upset me.	.14	-.13	.32	.25
There are people who will help me if something bad happens.	.20	.10	.38	.25
I don't hold grudges against those who upset or hurt me.	-.15	.12	.36	.07

Note. Factor loadings above .40 appear in bold.

Table 4. (Continued)

Summary of Exploratory Factor Analysis Results for Resiliency Scale for Young Adults using Principal Axis Extraction and Promax Rotation (N= 123)

<i>Item</i>	Factor Loadings			Communalities
	Sense of Relatedness	Emotional Reactivity	Sense of Mastery	
If I get upset or angry, there is someone I can talk to.	.28	.10	.34	.28
My family or friends will help me if something bad happens to me.	.28	-.15	.35	.43
<i>Eigenvalues</i>	14.55	4.37	1.93	
<i>% of Variance</i>	29.10	8.74	3.87	

Note. Factor loadings above .40 appear in bold.

Table 5.

Summary of standard regression analysis to predict physical health from protective resiliency, EI, and savouring

	B	Std. Error	β	<i>t</i>	Sig.
Protective Resiliency	.66	1.33	.07	.49	.623
EI	.58	3.63	.02	.16	.874
Savouring	1.25	2.86	.05	.44	.662

Note. All regression coefficients were non significant.

Table 6.

Decomposition for effects of EI on savouring and mental health

	<i>EI</i>		Bootstrapped 95% bias-corrected CI	
	Unstandardized	Standardized	Unstandardized	Standardized
<i>Savouring</i>				
Direct Effect	.61	.49	.43 to .78**	.33 to .62**
<i>Mental Health</i>				
Direct Effect	4.44	.22	.00 to 8.14*	.00 to .42*
Total Effect	7.52	.38	4.16 to 10.89**	.20 to .52**
Indirect Effect	3.08	.16	1.21 to 5.78**	.07 to .28**

Note. * = $p < .05$ ** = $p < .01$

Table 7.

Decomposition for effects of resiliency on savouring and mental health

	<i>Resiliency</i>		Bootstrapped 95% bias-corrected CI	
	Unstandardized	Standardized	Unstandardized	Standardized
<i>Savouring</i>				
Direct Effect	.26	.66	.21 to .31**	.55 to .75**
<i>Mental Health</i>				
Direct Effect	1.16	.19	-.25 to 2.62	-.04 to .75
Total Effect	2.42	.39	1.39 to 3.63**	.23 to .54**
Indirect Effect	1.25	.20	.35 to 2.28**	.06 to .35**

Note. * = $p < .05$ ** = $p < .01$

Table 8.

Decomposition for effects of resiliency and EI on savouring and mental health

<i>Resiliency</i>				
			Bootstrapped 95% bias-corrected CI	
	Unstandardized	Standardized	Unstandardized	Standardized
<i>Savouring</i>				
Direct Effect	.24	.60	.16 to .31**	.44 to .74**
<i>Mental Health</i>				
Direct Effect	.41	.07	-1.20 to 2.09	-.19 to .34
Total Effect	1.49	.24	.09 to 3.02*	.02 to .47*
Indirect Effect	1.08	.17	.25 to .21*	.04 to .32*
<i>EI</i>				
			Bootstrapped 95% bias-corrected CI	
	Unstandardized	Standardized	Unstandardized	Standardized
<i>Savouring</i>				
Direct Effect	.11	.09	-.09 to .32	-.07 to .26
<i>Mental Health</i>				
Direct Effect	3.85	.19	-1.11 to 7.97	-.06 to .42
Total Effect	4.36	.22	-.50 to 8.52	-.03 to .44
Indirect Effect	.51	.03	-.27 to 2.05	-.01 to .10

Note. * = $p < .05$ ** = $p < .01$

Table 9.

Summary of standard regression analysis to predict savouring from the four EI subscales

	B	Std. Error	β	t	Sig.	Partial	Semi- Partial
Self-Emotion Appraisal	.32	.13	.28	2.52	.013*	.21	.18
Other-Emotion Appraisal	.04	.10	.04	.40	.688	.03	.03
Use of Emotion	.22	.08	.23	2.58	.011*	.21	.19
Regulation of Emotion	.06	.09	.07	.73	.464	.06	.05

Note. * = $p < .05$; Partial = partial correlations, Semi-Partial = semi-partial correlations

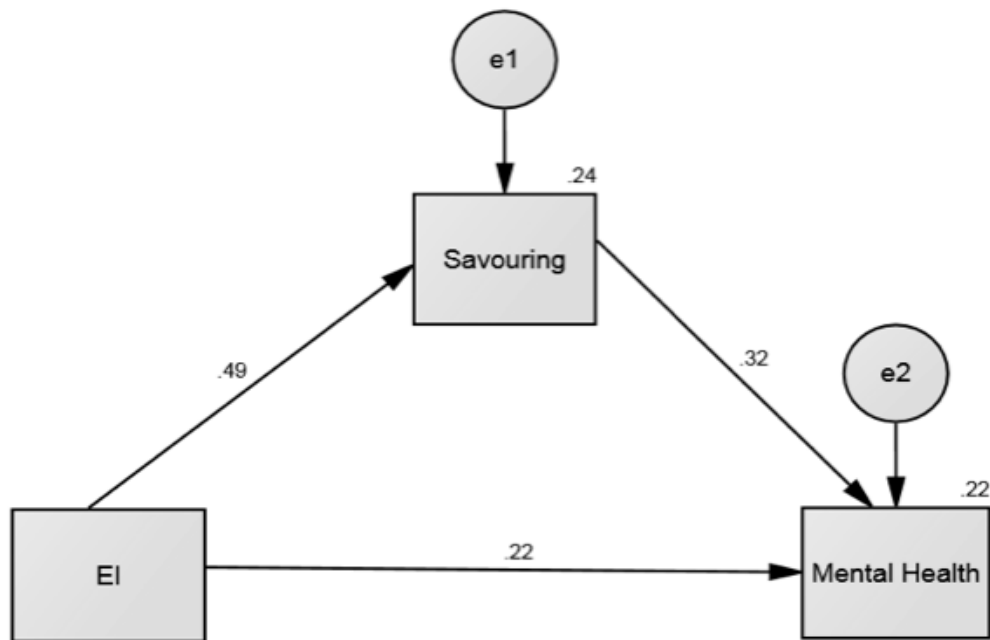


Figure 1. Standardized results of the path analysis demonstrating the EI-savouring-mental health link with savouring as a mediator. All paths are significant at $p < .05$; e = error.

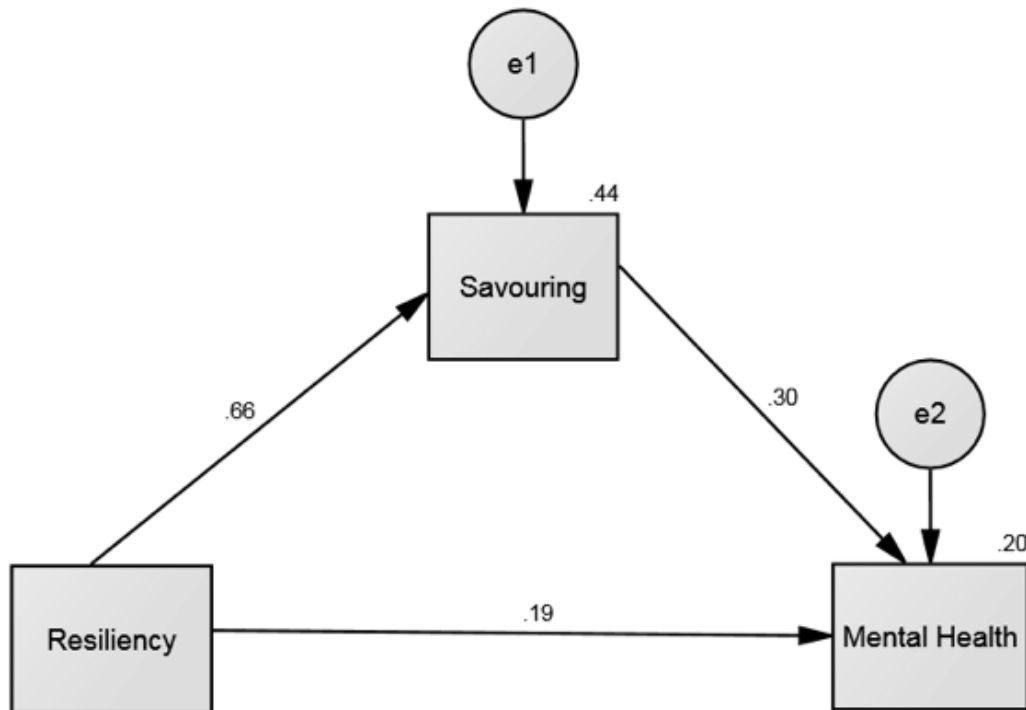


Figure 2. Standardized results of the path analysis demonstrating the protective resiliency-savouring-mental health link with savouring as the mediator. The direct effect is non-significant; e = error.

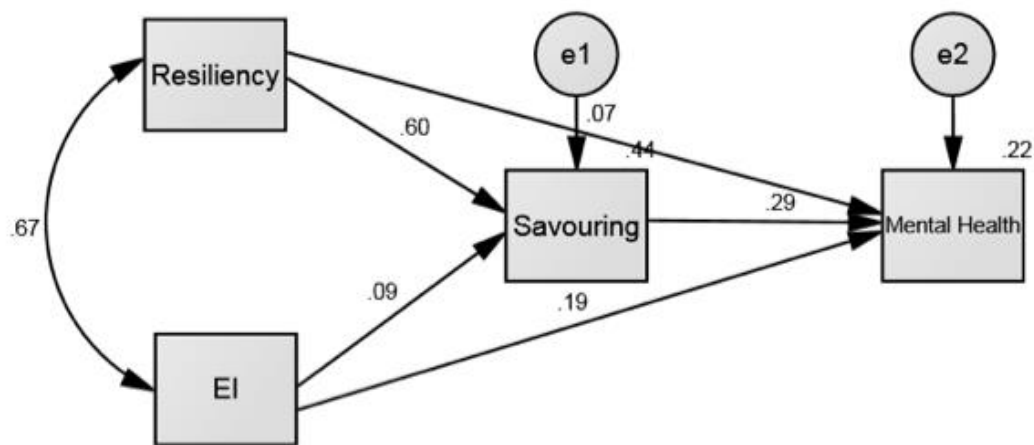


Figure 3. Standardized results of the path analysis demonstrating the combined EI-savouring-mental health and protective resiliency-savouring-mental health links. The EI-savouring-mental health paths are all non-significant and the protective resiliency-mental health direct effect is non significant; e = error.

APPENDIX A: ETHICS APPROVAL FORMS

1. INITIAL APPROVAL FORM



**Western
Research**

Research Ethics

Western University Health Science Research Ethics Board
NMREB Delegated Initial Approval Notice

Principal Investigator: Dr. Donald Saklofske
Department & Institution: Social Science Psychology, Western University

NMREB File Number: 106735

Study Title: Exploring the relationship between savouring and physical and mental health among older adults.
Sponsor: Social Sciences and Humanities Research Council

NMREB Initial Approval Date: June 01, 2015

NMREB Expiry Date: June 01, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Other	Qualitative Interview Questions-Adapted instrument	2015/05/07
Other	SF-36-Standard instrument	2015/05/07
Other	The Positive and Negative Affect Schedule-Standard instrument	2015/05/07
Other	The Resiliency Scale for Young Adults-Adapted instrument	2015/05/07
Other	Wong and Law Emotional Intelligence Scale-Standard instrument	2015/05/07
Other	The Savoring Beliefs Inventory-Standard instrument	2015/05/07
Other	Demographic Questionnaire	2015/05/07
Other	Debriefing letter for part 2	2015/05/07
Other	References	2015/05/07
Other	Debriefing letter for part 1	2015/05/07
Other	Recruitment telephone script for participation in part 2	2015/05/07
Other	Recruitment email for participation in part 2	2015/05/07
Other	Recruitment letter to retirement home participants	2015/05/07
Other	Recruitment script for community group participants	2015/05/07
Other	Letter of information and consent form for part 2	2015/05/07
Other	Request to recruit from retirement homes and community groups	2015/05/07
Other	Letter of information and consent form for part 1	2015/05/07
Western University Protocol		2015/05/13
Revised Letter of Information & Consent	Letter of Information - Online version.	2015/05/07

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the above named study, as of the NMREB Initial Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

 or delegated board member

Ethics Officer to Contact for Further Information

<input type="checkbox"/> Erika Basile ebasile@uwo.ca	<input checked="" type="checkbox"/> Grace Kelly grace.kelly@uwo.ca	<input type="checkbox"/> Mina Mekhail mmekhail@uwo.ca	<input type="checkbox"/> Vikki Tran vikki.tran@uwo.ca
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2. JULY 2015 REVISION APPROVAL FORM



Research Ethics

Western University Non-Medical Research Ethics Board NMREB Amendment Approval Notice

Principal Investigator: Dr. Donald Saklofske

Department & Institution: Social Science\Psychology, Western University

NMREB File Number: 106735

Study Title: Exploring the relationship between savouring and physical and mental health among older adults.

Sponsor: Social Sciences and Humanities Research Council

NMREB Revision Approval Date: July 24, 2015

NMREB Expiry Date: June 01, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Revised Western University Protocol	Revised Western Protocol	2015/06/18

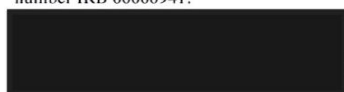
The Western University Non-Medical Science Research Ethics Board (NMREB) has reviewed and approved the amendment to the above named study, as of the NMREB Amendment Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario.

Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.



NMREB Chair

Ethics Officer to Contact for Further Information

<input type="checkbox"/> Erika Basile ebasile@uwo.ca	<input checked="" type="checkbox"/> Grace Kelly grace.kelly@uwo.ca	<input type="checkbox"/> Mina Mekhail mmekhail@uwo.ca	<input type="checkbox"/> Vikki Tran vikki.tran@uwo.ca
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3. FEBRUARY 2016 REVISION APPROVAL FORM



Research Ethics

Western University Non-Medical Research Ethics Board NMREB Amendment Approval Notice

Principal Investigator: Dr. Donald Saklofske

Department & Institution: Social Science\Psychology, Western University

NMREB File Number: 106735

Study Title: Exploring the relationship between savouring and physical and mental health among older adults.

Sponsor: Social Sciences and Humanities Research Council

NMREB Revision Approval Date: February 22, 2016

NMREB Expiry Date: June 01, 2016

Documents Approved and/or Received for Information:

Document Name	Comments	Version Date
Revised Western University Protocol	Received Jan 10, 2016	

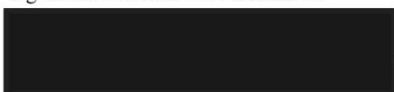
The Western University Non-Medical Science Research Ethics Board (NMREB) has reviewed and approved the amendment to the above named study, as of the NMREB Amendment Approval Date noted above.

NMREB approval for this study remains valid until the NMREB Expiry Date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

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Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB.

The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.



EB Chair

Ethics Officer to Contact for Further Information: Erika Basile ___ Katelyn Harris ___ Nicole Kaniki ___ Grace Kelly ___ Vikki Tran ___

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CURRICULUM VITAE

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Research Contributions:

Wilson, C. A. & Spencer, C. J. (2016). Review of the book *Well Aware: Developing resilient, active and flourishing students*, by P. Carney. *Canadian Journal of School Psychology*, 31, 66-70.

Wilson, C. (2016). Genetic basis of personality. In B. Carducci (Ed.), *The Wiley Encyclopedia of Personality and Individual Differences* (Vol. 3). Hoboken, NJ: Wiley-Blackwell. (Invited paper submitted for publication).

Babcock, S., & **Wilson, C.** (2016). Big five personality traits. In B. Carducci (Ed.), *The Wiley Encyclopedia of Personality and Individual Differences* (Vol. 3). Hoboken, NJ: Wiley-Blackwell. (Invited paper submitted for publication).

Plouffe, R., **Wilson, C.** & Smith, M. (2016). The dark triad. In B. Carducci (Ed.), *The Wiley Encyclopedia of Personality and Individual Differences* (Vol. 3). Hoboken, NJ: Wiley-Blackwell. (Invited paper submitted for publication).

Wilson, C. A., & Melnyk Gribble, L. (2016). Removal of Glasses Impairs Face Recognition, but Only for Certain Types of Glasses. Poster presented at the Association of Psychological Science's 28th Annual Convention, Chicago, Illinois.

Melnyk Gribble, L., & **Wilson, C. A.** (2016). Eyes on the disguise: How does changing the type of eyeglasses influence face recognition? Poster presented at the American Psychology Law Society Annual Convention, Atlanta, Georgia.

Wilson, C., Keefer, K.V., Spencer, C., Bond, B., & Parker, J.D.A. (2015). Discrepancies in Parent-Child Ratings of Emotional Intelligence: The Effect on Adolescents' Depressive Symptoms. Poster presented at the Canadian Psychological Association's 76th Annual Convention, Ottawa, Ontario.

Spencer, C., Keefer, K.V., **Wilson, C.**, Bond, B., & Parker, J.D.A. (2015). Emotional Intelligence and Conduct Problems: The Interactive Effects of Parent and Self-Ratings. Poster presented at the Canadian Psychological Association's 76th Annual Convention, Ottawa, Ontario.